

CLAIMS

1. A system comprising:

a HDTV timing generator having an HSYNC input and a VSYNC input, said
HDTV timing generator outputting a digital HD level signal;
5 a DAC interface having an input coupled to said digital HD level signal;
an output of said DAC interface being coupled to a DAC.

2. The system of claim 1 wherein an output of said DAC is coupled to a

display, whereby said output of said DAC produces an image on said display.

10 3. The system of claim 1 wherein said DAC interface comprises a plurality of
encoder channels, at least one of said plurality of encoder channels receiving said digital
HD level signal as an input.

15 4. The system of claim 3 wherein at least one of said plurality of encoder
channels receives a HDTV format data input.

20 5. The system of claim 4 wherein at least one output of at least one of said
plurality of encoder channels is coupled to said DAC through a multiplexer.

6. The system of claim 4 wherein at least one of said plurality of encoder
channels receives an input selected from the group consisting of a SCART format data

input, an NTSC format data input, a PAL format data input, and a SECAM format data input.

7. The system of claim 4 wherein said HDTV format data input is coupled to
5 an input of a multiplexer in said at least one of said plurality of encoder channels.

8. The system of claim 4 wherein said digital HD level signal is coupled to an
input of a multiplexer in said at least one of said plurality of encoder channels.

9. The system of claim 7 wherein said digital HD level signal is coupled to
said input of said multiplexer.

10. The system of claim 7 wherein an NTSC format data input, a PAL format
data input, a SECAM format data input, and a SCART format data input are coupled to
said input of said multiplexer.

11. The system of claim 8 wherein a SECAM level signal, a PAL level signal, a
SCART level signal, and an NTSC level signal are coupled to said input of said
multiplexer.

20

12. The system of claim 1 further comprising a modulator/timing generator
having an output coupled to said DAC interface.

13. The system of claim 12 further comprising a FIFO having an output coupled to said modulator/timing generator.

14. The system of claim 1 further comprising a color space converter having an output coupled to said DAC interface.

15. The system of claim 14 wherein said output of said color space converter is coupled to a HDTV data path, and wherein said HDTV data path is coupled to said DAC interface.

16. The system of claim 1 wherein said system is connected to a television set, said system transforming information received by said television set for display on a high definition display.

17. The system of claim 16 wherein said information is selected from the group consisting of video image information, graphics information, text information, and voice information.

18. The system of claim 17 wherein said information is received by said television set from an information source selected from the group consisting of a satellite, an Internet server, and a graphics controller.

19. The system of claim 1 wherein said system is connected to a computer, said system transforming information received by said computer for display on a high definition display.

5 20. The system of claim 19 wherein said information is selected from the group consisting of video image information, graphics information, text information, and voice information.

10 21. The system of claim 20 wherein said information is received by said computer from an information source selected from the group consisting of a satellite, an Internet server, and a graphics controller.

15 22. The system of claim 1 wherein said system is connected to a set-top box, said system transforming information received by said set-top box for display on a high definition display.

20 23. The system of claim 22 wherein said information is selected from the group consisting of video image information, graphics information, text information, and voice information.

24. The system of claim 23 wherein said information is received by said set-top box from an information source selected from the group consisting of a satellite, an Internet server, and a graphics controller.

25. The system of claim 1 wherein said system is connected to a personal digital assistant, said system transforming information received by said personal digital assistant for display on a high definition display.

5 26. The system of claim 25 wherein said information is selected from the group consisting of video image information, graphics information, text information, and voice information.

10 27. The system of claim 26 wherein said information is received by said personal digital assistant from an information source selected from the group consisting of a processor, a storage medium, and a personal computer.

15 28. The system of claim 1 wherein said system is connected to a telephone, said system transforming information received by said telephone for display on a high definition display.

20 29. The system of claim 28 wherein said information is selected from the group consisting of video image information, graphics information, text information, and voice information.

30. The system of claim 29 wherein said information is received by said telephone from an information source selected from the group consisting of a processor, a base station, and a public switched telephone network.

31. The system of claim 1 wherein said system resides in a bluetooth appliance, said system transforming information received by said bluetooth appliance for display on a high definition display.

5 32. The system of claim 31 wherein said information is selected from the group consisting of video image information, graphics information, text information, and voice information.

10 33. The system of claim 32 wherein said information is received by said bluetooth appliance from an information source selected from the group consisting of a processor and a personal computer.

15 34. A method to generate a HDTV video output waveform, said method comprising steps of:

receiving a horizontal sync waveform;

receiving a vertical sync waveform;

receiving an input data waveform;

20 generating a digital HD level signal, said digital HD level signal causing said HDTV video output waveform to be generated corresponding to said input data waveform.

35. The method of claim 34 wherein said digital HD level signal causes said HDTV video output waveform to be at a level selected from the group consisting of a low sync level, a high sync level, a blanking level, and an active level.

5 36. The method of claim 35 wherein said input data waveform is displayed on a display during a period when said digital HD level signal causes said HDTV video output waveform to be at said active level.

10 37. The method of claim 34 wherein said digital HD level signal causes said HDTV video output waveform to be at a low sync level after a plurality of clock cycles has passed since a high to low transition of said horizontal sync waveform.

15 38. The method of claim 34 wherein said digital HD level signal causes said HDTV video output waveform to be at a high sync level after a plurality of clock cycles has passed since a high to low transition of said horizontal sync waveform.

39. The method of claim 34 wherein said digital HD level signal causes said HDTV video output waveform to be at a blanking sync level after a plurality of clock cycles has passed since a high to low transition of said horizontal sync waveform.

20

40. The method of claim 34 wherein said digital HD level signal causes said HDTV video output waveform to be at an active level after a plurality of clock cycles has passed since a high to low transition of said horizontal sync waveform.

41. The method of claim 34 further comprising a step of supplying said digital

HD level signal to a DAC interface.

42. The method of claim 41 wherein an output of said DAC interface is

5 coupled to a display.

43. The method of claim 41 wherein said input data waveform is a HDTV

format data input, and wherein said HDTV format data input is supplied to said DAC

interface.

44. The method of claim 41 wherein said input data waveform is selected from

the group consisting of a HDTV format data input, an NTSC format data input, a PAL

format data input, a SECAM format data input, and a SCART format data input, and

wherein said input data waveform is supplied to said DAC interface.

45. The method of claim 44 further comprising a step of supplying a signal

selected from the group consisting of an NTSC level signal, a PAL level signal, a

SECAM level signal, and a SCART level signal to said DAC interface.

20 46. A system comprising:

a HDTV timing generator having an HSYNC input and a VSYNC input, said

HDTV timing generator outputting a digital HD level signal;

a DAC interface having an input coupled to said digital HD level signal;

1
said DAC interface comprising a plurality of encoder channels, at least one of said plurality of encoder channels receiving said digital HD level signal and a video level signal selected from the group consisting of a SECAM level signal, a PAL level signal, a SCART level signal, and an NTSC level signal;

5 an output of said DAC interface being coupled to a DAC, an output of said DAC being suitable for producing an image on a display.

10 47. The system of claim 46 wherein at least one of said plurality of encoder channels receives a HDTV format data input.

15 48. The system of claim 46 wherein an output of at least one of said plurality of encoder channels is coupled to said DAC through a multiplexer.

20 49. The system of claim 46 wherein at least one of said plurality of encoder channels receives an input selected from the group consisting of a SCART format data input, an NTSC format data input, a PAL format data input, and a SECAM format data input.

50. The system of claim 47 wherein said HDTV format data input is coupled to
20 an input of a multiplexer in said at least one of said plurality of encoder channels.

51. The system of claim 47 wherein said digital HD level signal is coupled to
an input of a multiplexer in said at least one of said plurality of encoder channels.

52. The system of claim 50 wherein said digital HD level signal is coupled to said input of said multiplexer.

5 53. The system of claim 50 wherein an NTSC format data input, a PAL format data input, a SECAM format data input, and a SCART format data input are coupled to said input of said multiplexer.

10 54. The system of claim 51 wherein said SECAM level signal, said PAL level signal, said SCART level signal, and said NTSC level signal are coupled to said input of said multiplexer.

55. The system of claim 46 further comprising a color space converter having an output coupled to said DAC interface.

15 56. The system of claim 55 wherein said output of said color space converter is coupled to a HDTV data path, and wherein said HDTV data path is coupled to said DAC interface.

20 57. A HDTV encoder comprising:

means for receiving an HSYNC input and a VSYNC input;

means for generating a digital HD level signal;

means for interfacing with a DAC, said means for interfacing with said DAC having an input coupled to said means for generating said digital HD level signal; an output of said means for interfacing with said DAC being coupled to a DAC, and an output of said DAC being coupled to a means for displaying HDTV video signals.

5

58. The HDTV encoder of claim 57 wherein said means for interfacing with said DAC receives a HDTV format data input.

59. The HDTV encoder of claim 57 wherein said means for interfacing with said DAC receives an input selected from the group consisting of a SCART format data input, an NTSC format data input, a PAL format data input, and a SECAM format data input.

60. The HDTV encoder of claim 57 wherein a video level signal selected from the group consisting of a SECAM level signal, a PAL level signal, a SCART level signal, and an NTSC level signal is coupled to said means for interfacing with said DAC.

20